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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,831	11/01/2006	Kenichi Machida	053385	8523
38834 7590 11/04/2009 WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036				
EXAMINER SHEEHAN, JOHN P				
ART UNIT		PAPER NUMBER		
1793				
NOTIFICATION DATE		DELIVERY MODE		
11/04/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

### Office Action Summary

**Application No.**

10/560,831

**Applicant(s)**

MACHIDA ET AL.

**Examiner**

John P. Sheehan

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 July 2009 and 30 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4 and 6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4 and 6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S5108)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

I. In claim 4, line 16, the phrase, "wherein the magnet satisfies following (A) and (D)" (emphasis added by the Examiner) is indefinite. If the magnet must satisfy only limitations (A) and (D) it is not clear why claim 4 recites the additional limitations (B) and (C). It is questioned whether applicants intended the phrase to read, wherein the magnet satisfies following (A) to (D) as recited in claim 6?

### ***Claim Rejections - 35 USC § 102/103***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4 and 6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over each of Daisuke et al. (Daisuke '303, Japanese Patent Document No. 01-117303, cited in the IDS submitted December 15, 2005) and Satoru et al. (Satoru '048, Japanese Patent Document No. 62-074048, cited in the IDS submitted December 15, 2005).

Daisuke '303 teaches a method of making a rare earth-iron-boron magnet comprising;

sputtering a layer of at least one of Tb, Dy, Al and Ga on to the surface of a rare earth-iron-boron magnet and

heat treating the coated magnet to cause the at least one of Tb, Dy, Al and Ga to diffuse into the rare earth-iron-boron magnet (Abstract). During this diffusion step the at least one of Tb, Dy, Al and Ga is diffused into the magnet as recited in the instant claims (See Abstract).

Daisuke '303's step of sputtering to apply the at least one of Nd, Pr, Dy, Ho, and Tb is encompassed by the step of "depositing vapor or fine particles" as recited in applicants' process claim 4 and is the same depositing process as is recited in applicants' claim 6. Thus, Daisuke '303 teaches the same process steps as recited in applicants' process claims 4 and 6. The elements Tb and Dy taught by Daisuke '303 are specifically recited

in applicants' claims as element M. Regarding the rare earth-iron-boron composition, applicants' claims do not recite any specific composition but rather merely recite "a rare earth-iron-boron based magnet" and therefore encompass the rare earth-iron-boron magnet taught by Daisuke '303.

Saturo '048 teaches a method of making a rare earth-iron-boron magnet comprising;

sputtering a layer of at least one of Nd, Pr, Dy, Ho, and Tb on to the surface of a rare earth-iron-boron magnet and

heat treating the coated magnet at a temperature of 400 to 900°C

(Abstract).

The elements Pr, Dy, Ho, and Tb taught by Saturo '048 are specifically recited in applicants' claims as element M. Saturo '048's step of sputtering to apply the at least one of Nd, Pr, Dy, Ho, and Tb is encompassed by the step of "depositing vapor or fine particles" as recited in applicants' claim 4 and is the same depositing process as is recited in applicants' claim 6. Saturo '048's heat treatment temperature of 400 to 900 °C overlaps the diffusion heat treatment temperature of 500 to 1000 °C recited in applicants' claims. Thus, Saturo '048 teaches the same process steps as recited in applicants' process claims 4 and 6. Regarding the rare earth-iron-boron composition, applicants' claims do not recite any specific composition but rather merely recite "a rare earth-iron-boron based magnet" and therefore encompass the rare earth-iron-boron magnet taught by Saturo '048.

The references and the claims differ in that the references are silent with respect to the following characteristics of the magnet produced by the claimed process:

$$H_{cj} > 1 + 0.2 \times M;$$

$$Br > 1.68 - 0.17 \times H_{cj};$$

the depth the element M is diffused into the rare earth-iron-boron magnet; and

the concentration of the element M increases as the crystal grain boundary layer approaches to the surface of the magnet and the concentration of element M is 50 mass % or more at 10  $\mu$ m from the surface.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because, in view of the fact that, as set forth above, each of Daisuke '303's and Saturo '048's sintered magnetic materials have compositions which overlap the sintered magnetic material recited in the instant claims and are made by the same method, one of ordinary skill in the art would expect Daisuke '303's and Saturo '048's resulting magnetic material to have all the same properties as the magnetic material produced by applicants' claimed method. In re Best, 430 USPQ 195, MPEP 2112.01.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can

be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In *re Best*, 195 USPQ 430, 433 (CCPA 1977)." (emphasis added by the Examiner) see MPEP 2112.01.

### ***Response to Arguments***

4. Applicant's arguments filed July 17, 2009 have been fully considered but they are not persuasive.

Applicants argue that Daisuke '303's higher coercive force is limited to a surface layer and that the coercive force of the magnet is not improved whereas in the present invention the coercive force of the magnet is improved three-dimensionally. The Examiner is not persuaded. It is noted that claims 4 and 6 are silent with respect to the coercive force of the magnet produced by the claimed process being improved three-dimensionally. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Further, the applicants' claims recite that the concentration of the element M increases closer to the surface of the treated magnet, i.e., there is a concentration gradient of the element M, highest at the surface and decreasing toward the inside of the magnet which is the same description given by Daisuke '303 (Abstract, the last 3 lines). In view of this, and the fact that applicants' and Daisuke '303's process as explained above in the statement of the rejection, are directed to the same process steps, one of ordinary skill in the art would expect Daisuke '303's magnetic material produced by Daisuke '303's process to have all the same

properties as the magnetic material produced by applicants' claimed process, In re Best, 430 USPQ 195, MPEP 2112.01.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977)." (emphasis added by the Examiner) see MPEP 2112.01.

Regarding Saturo '048, applicants argue that according to Saturo '048 "the improvement is limited to the surface deteriorated by working". Assuming for the sake of argument that this is the correct interpretation of Saturo '048, applicants have not pointed out how this feature distinguishes applicants' claimed process from Saturo '048's process. Further, in view of the fact that, as set forth above, Saturo '048's sintered magnetic materials have compositions which overlap the sintered magnetic material recited in the instant claims and are made by the same method, one of ordinary skill in the art would expect Saturo '048's resulting magnetic material to have all the same properties as the magnetic material produced by applicants' claimed method, In re Best, 430 USPQ 195, MPEP 2112.01.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15



USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977)." (emphasis added by the Examiner) see MPEP 2112.01.

Applicants have not explained why, in spite of the fact that the claimed process and the processes taught by each of the references as explained above are the same, applicants' claimed process results in different products than result from the processes taught by each of Daisuke '303 and Saturo '048 as argued by applicants.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571)

272-1249. The examiner can normally be reached on T-F (7:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John P. Sheehan/  
Primary Examiner, Art Unit 1793

JPS